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FOOD FOR FREEDOM

--IN THIS ISSUE--

You know the sardines the hostesses at cocktail parties keep passing around? Well, the canners are making a paste out of them and said paste has got food officials all excited.

Add a little pinch of this, a dash of that, fold in some diacetone sorbose, beat well, and you'll have enough vitamin C to serve 20,000 vitamin-hungry soldiers. You'll need a factory to do it, though.

The black market in meat is more than a furtive exchange of folding money. It is a combination of rustling, racketeering, waste of food and vital materials, and beefsteak shortages for honest folks.

And speaking of steak -- don't count on Dobbin to take up the slack. He's good material for radio jokes, but, as a piece de resistance, he won't go very far. We have figures to prove it.

They'll cut down the old pine tree--and haul it away to the mill. But--contrary to what the song says--they'll make tall oil out of it. Tall oil is the bright spot on the fats and oils horizon.

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MR. SARDINE GOES TO WAR

. . . . . By Grant Lyons

Sardines--those delicious but diminutive denizens of the deep--are going to war. But sardine connoisseurs among our Allies will look in vain for the gaudily decorated tin package with its trick opener. As a matter of fact, they will look for and not find any sardines--at least in their usual form. These wartime sardines will be nothing more nor less than a paste--something that looks and tastes like the anchovy paste that has become a trademark for all cocktail parties.

The new product--outgrowth of the Food Distribution Administration's search for nutritious foods that will supplement those in short supply--is being packed on an experimental scale in California at the present time. But production is slated to expand before long. This so-called "fish loaf" has been presented to and accepted by the Lend-Lease Administration, and by the Office of Foreign Rehabilitation and Relief. Specifications for Government purchase are being worked out now.

High in Protein and Vitamins

The new fish loaf or paste won't be available to civilians until after the war and that is unfortunate in a way. Both the Bureau of Home Economics and the National Research Council have approved the product nutritionally, for it is high in protein, vitamin B, and minerals--and, if desired, vitamins A and D can be added. FDA officials who have tried the product give it their unqualified stamp of approval from a taste standpoint. They say that it makes a delicious spread for bread or crackers and that it can be used in a number of other ways to augment protein requirements in wartime diets.

In producing the new food on a big scale, the whole sardine will be used--fins and all. The raw product, after inspection for freshness and condition, will be precooked and the oil and fish juices rendered out. Solid portions of the fish remaining will be mixed with certain of the concentrated juices from which the oil has been extracted to make the fish loaf. After the loaf has been packed in tin containers, it will be sealed and cooked again and ready for use.

Main requirements for an operating plant are fish cookers, presses, retorts, filling machines, seamers, and steam boilers, and most reduction plants already have equipment necessary to convert to the new form of processing. Because of the operating method used, it will be possible to put up the pack in locations where canned goods are not being packed at present.

It is estimated that an initial pack of 2 million cases of the new product is possible without affecting the quantity of the present fish pack or the present production of fish meal and fish oils. Were

the new method used on the entire California sardine catch, it is estimated that the resulting food pack would be twice or three times as large as is now produced, while fish oil production would be about three-fourths larger and fish meal production would be a third larger. The new process also would reduce labor requirements considerably since only a fifth of the workers are required by this method of processing compared to the now generally accepted method of packing sardines. This is particularly important since the labor situation in most West Coast fish canneries is acute.

Because of the high food value of the new product, and the efficiencies that have shown up in its production, the possibility of using the processing method on the lowly Atlantic Coast menhaden is being studied. This fish, previously used only for its oil and meal, n w is being canned for Lend-Lease shipment. Its use as a food also was develcped by the Food Distribution Administration in cooperation with members of the food industry.

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FEBRUARY HATCHINGS SET NEW HIGH RECORD

Hatcheries throughout the country are exerting an all-out effort to meet the greatest demand the industry has ever had for baby chicks and turkey poults. The February output of 121,927,000 chicks was 24 percent above the previous high output of February 1942, and was 51 percent above the 5-year (1938-42) average. The number of eggs set--284,188,000 --was 13 percent above the previous record of February 1942.

It appears that in spite of the large demand for chicks early in the hatching season, the supply of hatching eggs will not be sufficient for full sets before late March or April. Because of the early rush for chicks, most hatcheries reported a shortage of hatching eggs during February, even though the number set was the largest of record.

A longer hatching season than usual and much larger hatchings during the latter part of the season will be necessary to fulfill all the chick orders hatcheries now have on hand.

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Prices of sweetpotatoes will be supported through purchases by the Food Distribution Administration at $1.15 per bushel during the harvesting season from August through November; at $1.30 per bushel in December and January, and at $1.45 per bushel during February, March, and April. These prices apply to sweetpotatoes grading U. S. No. 1 and packed in either bushel crates, baskets, or hampers. U. S. No. 2, containing 75 percent or better of U. S. No. 1 quality, will be supported at 15 cents per bushel below the prices for U. S. No. 1.

ENERGY BULLETS

. . . By R. Corbin Dorsey

With every consignment of Army rations shipped to North Africa last November went a carefully-calculated number of vitamin rations. In the battles of Sened and Faid Pass, the Yanks food supplies were fortified with vitamin concentrates and multi-vitamin capsules--tablets that combine most of the vitamin alphabet, and are designed to ward off a range of deficiency diseases from scurvy to mental depression.

These vitamin concentrates do not take the place of regular meals. But they are essential food supplements in such areas as Persia, North Africa, and the Southwest Pacific where fresh foods may not be available in large quantities, or dietary deficiencies may be common.

Vitamin Concentrates

That's why Uncle Sam is putting vitamin concentrates in the flour, soup powder, drink mixes, and other foodstuffs sent to our own and allied field kitchens. Tablets are reserved for the mess kits of individual fighters holding advanced posts, making forced marches, or doing other fighting jobs.

For home-front health and morale, vitamin concentrates are being incorporated in larger quantities of staple foodstuffs. Most oleomargarine is being fortified with vitamin A, more milk with vitamin D. Enrichment of all white bread with vitamin B_1 and niacin is required under a recent food order, with riboflavin soon to be added. Food authorities generally feel that incorporation of vitamin concentrates in such universally used foodstuffs is the most equitable and advantageous means of distributing available supplies to war-working civilians.

In addition to the vitamin concentrates purchased by the armed forces, the Food Distribution Administration has bought more than $12,750,000 worth, primarily for the British and Russians. Most of this amount was for bulk vitamin concentrates--(vitamin A) fish liver oils, ascorbic acid (vitamin C) and so on -- used for subsequent fortification of foodstuffs or for fabrication into special supplements. The Food Distribution Administration also is buying multi-vitamins already fabricated into tablets--more than 80,000,000 in a recent purchase.

With their new war-rocketed importance, vitamins are being lifted from the category of aspirin tablets and Sedlitz powders to their rightful place as essential foodstuffs. Army quartermaster corps officials and food processors are thinking about them as weapons of total war--and asking questions.

What are the main sources of concentrated vitamin preparations? What is our total wartime supply? What agricultural products are used in

the manufacture of vitamins? What are the processing procedures of the vitamin industry and its distribution methods?

Aside from vitamin A, which is concentrated from natural fish liver oils, most of the supplies for vitamin preparations are factory-made synthetics. Under the microscope, vitamins are tiny crystals in the shape of bars or cones or needles. All the vitamin B_1 in your body, or vitamin C in a row of carrots, would make just a pinch of white crystalline powder. Your stomach has its own way of quickly getting the vitamins out of carrots, but manufacturing the synthetic powders that make the vitamin preparations for fighters in North Africa or the Ukraine is quite another matter.

Citrus Juices

Although the British Navy knew about and put to work the anti-scurvy value of citrus juices more than a century ago, it was not until 1932 that ascorbic acid--the chemical name for vitamin C--was isolated in pure form and definitely recognized as a chemical compound of known structural formula. In chemists' language the empirical formula--that's the easy one--of ascorbic acid is $C_6H_8O_6$. Now there are many ways of putting together 6 atoms of carbon, 8 of hydrogen, and 6 of oxygen--but only one or two of them will make ascorbic acid. What the chemist calls the structural formula--arrangement of the atoms to form the ascorbic acid molecule--is highly complex. The very complexity of the thing is one reason why it took years and years to be put together.

The empirical formula of vitamin B_1, the "energy vitamin" is $C_{12}H_{18}ON_4SCl_2$. That means a lot more atoms to juggle with, and the B_1 structural formula makes the putting together of ascorbic acid look like a light afternoon chore. Consequently, although vitamin B_1 deficiency was known to be the cause of beriberi nearly 50 years ago, the vitamin itself was not successfully synthesized in the laboratory as a chemical compound--thiamine hydrochloride--until 1936.

The presence in yeast of the substance later called vitamin B_2 or G, and now called riboflavin, was suspected as a factor essential for growth and health years before the synthesis of the pure vitamin was achieved in 1935. In 1937, when the synthesis of vitamin A was first reported, the use of cod liver oil in connection with night blindness, respiratory troubles, and other diseases was already so well established that fish liver oils have continued as the major source vitamin A preparations, and as yet no synthetic has been developed on a commercial scale.

Making a gram or two of a vitamin synthetic in the laboratory is one thing, but manufacturing bulk quantities for use in world-wide warfare is a very different problem. It means finding agricultural and industrial raw materials in large quantities, constructing a mass production process for each part of the jig-saw puzzle molecule, and setting up a complex factory line.

What works in a test tube may not click at all in a ton-size vat. Such factors as temperature, moisture, and solubility conditions may vary widely depending on the size of the operation or apparatus employed. Even a relatively simple process of making synthetic vitamin C involves the following: Corn to corn starch, to glucose hydrogenated to sorbitol, converted to sorbose, to diacetone sorbose, and then oxidized to 2-keto-l-gulonic acid, to vitamin C. Commercial production of riboflavin was held up for months after the synthesis had been evolved because of the difficulty of manufacturing the ribose part of the molecule. Ribose is a very rare sugar. First efforts by one large firm to complete the vitamin B_1 molecule produced such a vile and persistent odor that laboratory workers almost lost their best friends.

Manufacturing Problems

Initial manufacturing problems explain in part why it was 1937--5 years after vitamin C was first synthesized--before the synthetic became commercially available. Commercial quantities of vitamin B_1 were also first sold in 1937--after nearly 2 years of experimental manufacturing--riboflavin in 1938, and B_6--pyridoxine hydrochloride--in 1939. Niacin or nicotinic acid was prepared as long ago as 1867, but its use as a vitamin cure for pellagra was not definitely established until 1938.

Fortunately, American manufacturers of synthetic vitamins had hurdled the initial stages of mass production before the Nazis struck. Otherwise our armies today would be exposed to the deficiency diseases that killed or deformed hundreds of thousands of Europeans in the last war--and lost major battles.

Under the impulse of wartime necessity, production of most synthetic vitamins has jumped from grams and ounces to thousands of pounds annually--how many is a military secret. In 1942 production of vitamin B_1 and vitamin C more than doubled. Riboflavin production increased tenfold, and there have been further sharp increases so far in 1943. Thanks to wartime utilization of soupfin shark and halibut liver oils, as well as cod liver oils, Federal Government agencies have been able to accumulate substantial stockpiles of vitamin A concentrates. Most of the fish liver oils also contain some quantities of vitamin D, the "sunshine" vitamin, and additional supplies are obtained from the relatively simple process of activating ergosterol.

High Prices

Before the introduction of synthetics, vitamins sold at platinum prices. In 1935 a gram of vitamin B_1, laboriously extracted from natural sources, cost $300. Two years later, when synthetic B_1 was produced, the price dropped to $7.50 a gram--and has continued steadily downward. In bulk purchases by the Food Distribution Administration, the average price paid decreased from approximately 65 cents per gram in 1941 to 37 cents in 1942. As compared with the pre-synthetic price of vitamin C amounting

to $213 per ounce, the FDA paid an average price of $1.85 per ounce in 1941, and $1.08 in 1942.

Prices of riboflavin and nicotinic acid have also dropped sharply in the past 2 years, although some of the more recently-developed synthetics, such as vitamin B_6, still sell at dollars-per-gram prices. The relative costs of bulk quantities of 4 important synthetic vitamins on a per pound basis is as follows (average prices paid by FDA in 1942):

Nicotinic acid	$ 5	per pound
Ascorbic acid, (vitamin C)	17	" "
Thiamin, (vitamin B_1)	168	" "
Riboflavin	309	" "

The war also has brought a reduction in cost of fabricated vitamin preparations. A bottle of 100 tablets, containing not more than a gram of some synthetic vitamin with a wholesale price in cents, may cost you a dollar or two at your drug store. Basic vitamin manufacturers do not fabricate and distribute tablets; and substantial additional costs above the price of the basic synthetic are accumulated in fabricating, packaging, and merchandising finished vitamin preparations. These distribution costs usually account for a considerably larger part of the consumer's dollar than the cost of the basic vitamin substance.

On the large war orders now being placed by Government agencies, vendors are covering such costs at much lower figures. On its first purchase of multi-vitamin tablets, the Food Distribution Administration paid $2.30 per thousand for one important type--the lowest price ever paid by the Government for such products. A second type of multi-vitamin purchased at an over-all cost of $3.25 per thousand, combines in a single tablet most of the known vitamin substances commonly associated with the prevention of typical wartime dietary diseases.

Fighters' Supplements

Such multi-vitamin tablets are designed primarily to supplement the food rations of allied fighters, not to supply a soldier's complete vitamin requirements, nor to treat advanced cases of vitamin deficiency. However, each tablet contains about one-half a person's daily requirements, as set forth by the Food and Nutrition Board of the National Research Council. The comparison is as follows:

	Units	Multi-vitamins	Recommended
Vitamin A	U.S.P. Units	2,500	5,000
Vitamin D	U.S.P. Units	200	400
Vitamin C	Milligrams	25	75
Vitamin B_1	Milligrams	1	1.8
Riboflavin	Milligrams	1	2.7
Niacin	Milligrams	10	18

Normally, you get an adequate vitamin intake from the natural supply in well-balanced fresh foods. Even in wartime, proper distribution of available foodstuffs will take care of all but a minor part of civilian vitamin requirements. But fighting men in combat action may have greater need for vitamins. Some, such as B_1 and C, are not stored in the body to any extent and must be taken in continually to maintain probodily vigor and resistance to disease. Troops in advanced positions or protracted battle may lose contact with field kitchens; and may need to rely heavily on concentrated rations such as fortified biscuits, tinned meat, and vitamin preparations.

Obviously, a substantial part of U. S. production of synthetic vitamins must be reserved for military purposes, as well as supplies of natural-vitamin concentrates, such as fish liver oils, concentrated orange juice, and lemon juice crystals. The bulk of U. S. supplies of most synthetic vitamins goes into the production of pharmaceutical preparations. As the war continues a larger proportion of available supplies will probably be diverted in order to meet military needs abroad and obtain more equitable distribution on the home front. Our civilian requirements for vitamin C will increase to the extent that fresh fruit and vegetable supplies are diminished. More riboflavin will be needed where milk is short.

Good Job

The manufacturers of synthetic vitamins have done an amazing wartime job in a short time, but there are limits to what they can do. Raw supplies and new manufacturing equipment are limited in some instances. The total number of firms in the vitamin industry is small. A recent directory lists 26 firms selling vitamin A, 12 vitamin B_1, 23 vitamin C, and so on. However, many of these are fabricators and wholesalers of vitamin tablets and other preparations, not basic manufacturers. The most recently published Government report on basic manufacturers lists only three producing vitamin C, for instance, and only two making sorbitol, the important link in the chain of its composition.

Best estimates are that U. S. supplies of vitamins A and D will be adequate for all purposes during 1943; vitamin B_1 and niacin reasonably so. Wartime needs for vitamin C and riboflavin have increased so rapidly that it is difficult to estimate what the future supply situation will be, but steps have recently been taken for further increases in production. As the war continues, probably more of the supplies available to civilians will be used to fortify other foodstuffs. Mixing vitamin concentrates with foods eaten by all classes of people, including the low income groups, is our best guarantee of equitable and efficient distribution of available supplies.

With the United States the best fed country in the world--even with wartime rationing--we can continue to meet most of our civilian dietary needs through balanced meals of vitamin-potent natural foods. But if substantial quantities of vitamin concentrates are already going to our

armed forces, with only a fraction of them overseas, what will be the demand when several million of our men are fighting in war-ravaged Europe and Asia? And what promise do vitamin concentrates and vitamin-fortified foodstuffs hold for the millions of children and other war victims in the Nazi-ravaged countries?

To answer these questions the United States already has a splendidly equipped synthetic vitamin industry. Its facilities are newborn, and none too numerous, but they are working open throttle in a race against disease and death.

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FEWER SPRING LAMBS REPORTED THIS YEAR

The number of early lambs in the principal producing States will be somewhat smaller this year than last, the reduction being largely a result of the smaller number of breeding ewes. Marketings of early lambs before July 1, however, may be little different from last year as lambing was early this year in some States and on the whole the early lambs this year seem to have made a better development to March 1. Shipments of grass fat yearling lambs from Texas during the second quarter of this year, however, are expected to be in smaller volume than in the corresponding period of last year.

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WILDER NAMED MEMBER OF FOOD ADVISORY COMMITTEE

Appointment of Dr. Russell M. Wilder, Chief of the Civilian Requirements Branch of the Food Distribution Administration and formerly chairman of the Food and Nutrition Board of the National Research Council, has been announced by the Department of Agriculture.

Dr. Wilder--aided by his organization--functions as "claimant" for the requirements of civilian consumers in the consideration and allocation of U. S. food supplies among the civilian population, military services, the territories, the Allies, and for other export.

Dr. Wilder is on leave from Mayo Clinic.

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An expansion program to increase the production of quick-frozen vegetables by nearly 100 million pounds over 1942 has been announced by the Department of Agriculture. It is expected to bring total frozen vegetable production to over 250 million pounds, and about 30 percent of the production increase will be available to civilian consumers.

OPEN SEASON ON THE MEAT CHEATS

. . . . . By Jim Roe

The next time a rickety livestock truck wheezes to a stop in your farmyard and the driver genially offers you a higher-than-market price for your cattle or hogs, you'd better look him over with a suspicious eye. He might be the first link of the black market system--a system so extensive it has just about played hob with the Nation's legitimate livestock marketing machinery. But black markets have a good chance of becoming a thing of the past for Uncle Sam has declared open season on the meat cheats--and you can help him bag a few.

Anybody who has visited a country livestock auction or a terminal stockyards in recent months knows that all is far from normal. At the country auctions aged bulls -- real old patriarchs of the pastures -- have been sold at fancy prices, often to appear later in the cases of unscrupulous butchers as "prime beef." At the terminal stockyards, livestock receipts have not been as large as expected, and there are new people bidding for the animals that do arrive--men who don't care much about the price as long as they get the stock.

Motorized Rustlers

These are some of the symptoms of the black market. There are other serious indications that something is wrong. Motorized rustlers travel the range lands at night, shooting animals where they find them, dressing them on the spot, and driving away with the carcass in the rear of the truck. Shady buyers travel the byways of the more settled farming sections, buying live animals from farm to farm. Then they dispose of the stock to illegal butchers, or set up in business for themselves. Little cash or respectability is needed, for both overhead and honesty are small. A deserted country road will serve, or a vacant warehouse at the edge of town. Some retail butchers possessed of more greed than a sense of fairness have been glad to buy the meat at high prices, to parcel it out to housewives at still higher rates. And it makes no difference if it is meat from a diseased animal, slaughtered under conditions that ignore every sanitary rule adhered to for many years by established meat packers. The black marketeers answer questions with this question, "It tastes like beef, doesn't it?"

These dealings are big business. The diversion of animals from legal slaughter channels has been so huge as to cause wide variation between the numbers of animals that have been received at terminal markets and the numbers that should have arrived -- variations to a degree never known before. In January and February federally-inspected slaughter of cattle was 9 percent under a year ago, while it should have been at least as large as last year.

Black market operations divert large amounts of meat from customary

channels of trade and some consumers are beginning to look upon steaks and roasts as rare trophies--to be carreid home in triumph when they can be found. Even the Government has been unable to obtain all the meat it needs for our fighting men and our Allies.

Over and above the actual meat lost to legal trade, enormous quantities of strategic byproducts have been wasted. Potential surgical sutures, adrenalin, insulin, photographic film, leather, tankage, fertilizer, and bone meal--as well as hearts, livers, and other edible meats--are but a few of the items lost when the black marketeers operate.

These black markets, obviously, must be stopped, and you--right out on your farm--can help. Up to now it has been a bit difficult for you to link up your own sales with illegal dealings in meat and it has been next to impossible to be sure that your animals stayed in legal trade channels. That has been a handicap.

But it will be easier from now on to find out just what happens to your livestock after it leaves your hands. Under Food Distribution Order No. 26 you are required to keep records that include the date of each purchase or sale, the name and address of the buyer and seller, and the number, kind, weight, and price paid for the livestock. Chances are you are already doing this, for good business sense dictates such a policy, especially for income tax purposes.

You are not required to report these records. You are merely required to keep them on hand--for a period of 2 years--for investigation if that becomes necessary. And you may be sure these records will be very essential in running down the meat cheats.

But this new Government program is not a cure-all that will definitely stamp out black markets in meat; it is only one step. Black markets can never be completely eliminated without the full cooperation of farmers, distributors, processors, and consumers.

Report Suspicious Characters

Aside from keeping records, you can cooperate by reporting suspicious characters to your USDA County War Board. If a dealer comes to the door ready to pay a price that is out of line with regular market prices, take down the license number of his truck, look him over carefully, and write down a description of him after he leaves. Then turn all your information over to your War Board as soon as you can, for such a dealer probably deserves a little investigation. If he is violating the law, he needs to be put out of business.

Another way you can cooperate is by getting a slaughter permit from your USDA County War Board--that is, if you slaughter home-produced animals on the farm and sell part of the meat. Such permits are required under Food Distribution Order No. 27, which stipulates that each wholesale

cut be marked with the permit number issued to you. Your County War Board or your County Agent will show you how to mark the carcasses.

Even with the slaughter permit, however, you must not sell a larger quantity of dressed meat this year than you sold in 1941. If you submit no records of your 1941 meat sales, a small quota is assigned you. This quota is your choice of 300 pounds of meat, or any part of the meat produced from three head of livestock, which may not include more than one head of cattle.

Each local slaughterer, butcher, and farm slaughterer is required to collect ration points and make complete reports on all meat sold or transferred by him after meat rationing goes into effect. The OPA price ceilings apply to all meats sold, and require that beef, veal, lamb, and mutton be graded in accordance with U. S. Department of Agriculture standards.

Bad News

This slaughter permit system will not interrupt normal farm slaughter for home use and isn't intended to--you don't need a slaughter permit, for example, if you butcher a home-raised animal and use all the meat at home. Even if you get a permit to sell some, your slaughter for home use will not be limited, and the permit system will enable you to continue your normal rate of sales in any regular dressed meat business.

But the new system is bad news for the illicit slaughterer. If he sells a wholesale cut of unmarked meat after March 31, he is branded in the eyes of the law as a black marketeer. And under the provisions of FDO No. 27, he can be prosecuted under the laws of the United States and the penalties are stiff.

Food Distribution Orders 26 and 27 are aimed at the dishonest operators--not the farmer who is trying to cooperate with the Government's program of food supply management, and not the honest butcher who is trying to keep within slaughter limits, price ceilings, and all. These orders are designed to help the square shooter by assuring him that the meat he has worked so hard to produce will reach legal trade channels.

That is important. You spend long, hard hours increasing your livestock production and you are under the impression that our fighting men, Allies, and hard-working civilians are benefiting. But when your animals go into the black market, your efforts are wasted just as much as the work that produced a bomber is wasted if it is sabotaged.

If you make it your own responsibility to see that your livestock gets into honest hands--to cooperate with the Department of Agriculture in its eforts to wipe out black markets--you will need no "E" award to know that you are speeding the day of victory.

N.Y. THEATER DRAMATIZES WARTIME FOOD SITUATION

The wartime food situation and how it affects every individual is being dramatized in a new play, "It's Up to You," presented by the Skouras Theaters, the American Theater Wing, and a group of food industry associations, with the cooperation of the U. S. Department of Agriculture. The play opened March 31 at the New York Academy of Music.

Written by Arthur Arent, and directed by Elia Kazan, director of "The Skin of Our Teeth" and "Harriet," the play is being presented as a wartime service in the interest of better nutrition and more effective management of wartime foods. No admission is being charged.

Theaters are being donated for the free shows by Skouras Theaters Incorporated as part of their war effort, and the food industry associations--through the American Theater Wing--are financing the show. After the New York production, the script of the play will be available to non-commercial groups throughout the Nation for local presentation. These groups will include the National Theater Conference, the American Educational Theater Association, the American Communal Theater, the National Thespian Dramatic Honor Society for High Schools and other interested non-commercial theater groups. These school and community theater organizations have recently formed a Theater War Council to centralize and increase their contributions to the war.

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NUTRITION DIVISION TRANSFERRED TO FOOD DISTRIBUTION ADMINISTRATION

The Nutrition Division of the Office of Defense Health and Welfare Services was transferred to the Food Distribution Administration March 24 under Executive Order 9310. This order makes effective a recommendation to the President submitted jointly by Secretary Wickard and Paul V. McNutt, Director of the Office of Defense Health and Welfare Services, emphasizing the need for correlating the national nutrition program with the overall food program.

The Nutrition Division will be the nucleus of a Nutrition and Food Conservation Branch of the Food Distribution Administration, which will attempt to align every kitchen in the Nation with the war food program. This program will be conducted primarily through the hundreds of State and local committees that have been cooperating with the former Nutrition Division.

Chief of the Nutrition and Food Conservation Branch is M. L. Wilson, Director of the Agricultural Extension Service. Dr. W. H. Sebrell, of the Public Health Service, is Associate Chief. Mr. Wilson and Dr. Sebrell have directed nutrition work under the ODHWS.

STRAIGHT FROM THE HORSE'S MOUTH

. . . . By Norman Kuhne

Remember the story of John Doe, his home, and his horse? How, when the mortgage on his home was overdue, and John was out of a job, he took his last two dollars out to the track, parlayed it into a small fortune, and lived happily ever after, thankful for the horse that saved the day and the old homestead?

Whether or not the horse helped John save his home by running a good race, this much is certain: The horse is not going to help John or anyone else overcome the current meat shortage, no matter how much talk to that effect you may have been hearing lately.

Regardless of where you stand on this horsemeat controversy, whether you're soft-hearted and against it, or hard-boiled and for it, you can take a straight tip from Dobbin himself, and forget the whole thing. For the simple fact is that there just aren't enough horses to make a meat problem--or to solve one.

All those veterans of the sport of kings that you have had no use for since the day they folded in the stretch, added together, wouldn't provide enough horseburger to meet the needs of the average large city for more than a few days. All of the horses reported on farms in the United States, something over 9 million head, even if sent to the market wouldn't provide enough meat to increase your ration appreciably. Our cattle and calf population, for purposes of comparison, is close to 78 million; sheep and lamb, 55 million; and hogs, 74 million.

Wild horses from the range, while not included in the above count, are not very numerous, and couldn't be rounded up fast enough even to meet the demand for pet food.

The horse population of the United States has been on the downgrade since the peak year of 1915 when the number on farms was 21 million. With the introduction of power machinery on the farm, and the automobile in the city, the decline in the number of horses has been gradual but steady so that today we're back to where we were in 1877.

Today, with the shortage of farm machinery and the big food production job ahead of our farmers, you can bet your last ration coupon that no horse able to pull a plow or cultivator is going to show up in the meat market. The same thing goes for the plugs hitched to the ice wagons and milk wagons--they've got work to do, and they're worth their weight in new tires.

As for those home-saving race horses--why, even the cheapest claiming plater is worth around a thousand dollars, which puts him safely out of reach of the carving knife.

FARM EMPLOYMENT AT LOWEST MARCH LEVEL

The number of persons working on farms March 1 this year was slightly below that on the same date in 1942 but up 361,000 from a month earlier. There were 8,730,000 persons working on farms the first of March this year, compared with 8,369,000 on the first of February, and 8,738,000 the first of March 1942. This was the lowest number on March 1 in the 19 years of monthly records and compares with an average of 9,412,000 for the 5-year period 1935-39.

While the numerical change in the labor force from a year ago was relatively small, the Department of Agriculture points out that the efficiency of this force has been sharply lowered by losses of skilled, able-bodied workers who have had to be replaced by older and less skilled workers, women, and young people.

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FARMERS WARNED AGAINST SELLING BLACK WALNUT LOGS AT "GYP" PRICES

Black walnut is in keen demand right now for use in making gunstocks and prices have gone up sharply. But many farmers have sold their logs at "gyp" prices to men who pretend to be "Government buyers."

According to the Forest Service, there are no "Government buyers," though there are buyers for firms holding Government contracts--which is something else. So the farmer should be careful about selling to the glib-tongued gent who misrepresents himself.

It would pay a farmer to write to his State Extension Service and get the going price on black walnut timber--the large, clear logs are worth more than the small or defective pieces, of course. That will give him a basis for bargaining. Then, to be sure that everything is all right, he ought to insist on cash on the barrel-head before the logs are moved off the place.

--V--

Under Food Distribution Order No. 28.1, all livestock slaughterers operating under Federal inspection will be required to set aside for war uses the following percentages of their meat: Beef--other than Cutter and Canner grades, 40 percent; Beef--Canner and Cutter grades (steers, heifers, and cows), 80 percent; Veal, 30 percent; Lamb and Mutton, 35 percent; and Pork, 45 percent.

The order applies to slaughterers' inventories of meat frozen, chilled, cured, and in cure as of March 14, 1943, and also to the meat they produce during the period from March 15-April 30, inclusive.

TALL OIL TALE

. . . . By Elbert O. Umsted

The bombardier squints, trips a lever. He watches the bombs drop tandemwise. Far down, two of them in quick succession pock the sea by the toy-size ship. Crimson fire puffs amidships, like a struck match, and then the whole foredeck belches flame. The bomber staggers with the shock, roars on. Before the rain squall blots out the sight, the bombardier watches the ship plunge, her stern the last to go.

On through the rain the bomber drones, her motors surging with power. Hours later, the pilot looks down, eyes his gauges, banks to the left, and points the nose of his plane toward a black dirt runway stretching like a strip of dark carpet against the green of the jungle. He lets the bomber settle into a long, shallow glide.

The runway looks formidable. No concrete, no steel mats. It's still raining. An ordinary dirt field would be a quagmire--a death trap for a heavy plane. But the bomber continues her glide, her wheels down now. Her motors turn over slowly. She skims the palm trees.

Her wheels hit the black dirt.

Happy Landings

She keeps rolling so smoothly the ground crew scarcely realizes she has landed except by the sideways spurts of water when her wheels slice through the little rain pockets. She brakes evenly to a stop.

Crew members swarm out of the plane to the black dirt field. The pilot's the last man to jump. Half falling with the impact, grinning, he strides away toward his quarters. At the point where his heels hit the black dirt--what might have been the cause of a ghastly crash--there's not even a dent.

The black dirt has been treated with tall oil.

It's not only landing fields. The bottom of that Jap ship the bombardier sent to Davy Jones' Locker was covered with a paint containing tall oil and a poison that kills young barnacles. It makes oils that lubricate the cutting tools of high-speed turret lathes. It makes insulators, metal polish, insecticides. It pinch-hits for semi-drying oils.

It is used in the flotation recovery process for many oxide minerals including war-important manganese. It is used in industrial soaps, useful for scouring the wool for war uniforms and cotton linters for munitions; in varnishes, paper sizing, and water-proofing agents for cloth. In brief, it is a real war product. It is going to be heard of more and more as we begin to run into a <u>real</u> shortage of fats and oils.

But what is tall oil?

"Tall" is Swedish for "pine." Tall oil comes from pine trees, but since we already had a "pine oil" in English, the woodpulp paper makers called it tall oil. "Liquid rosin" is another name for it.

Maybe you know about paper making. In the manufacture of kraft paper, chips from pine logs are soaked and cooked in a solution of caustic soda and other chemicals till they disintegrate into a pulp--but it's the "waste" that's left that interests us now. Paper is important, too, but we're looking for a way of getting that bomber crew down through the rain onto a palm-fringed landing field that otherwise would be a swamp.

So let's look into the tank that was used for cooking those pine chips.

We see a dark liquid, and it smells pretty awful. We could reproduce the odor, approximately, by mixing rosin and certain organic sulphur compounds with a bit of the fish we forgot to throw out last month. In the liquid a curd of "soap" floats. By treating the dark-brown soap with an acid, we liberate fatty acids and rosin acid and get a dark-brown, sticky, oily product--tall oil.

Not Standardized

It isn't standardized. Its quality varies with things like climate, soil, the time of year, the species of pine. But ordinarily about 10 percent of it is "unsaponifiable" and useless, and the other 90 percent is divided roughly half and half between rosin acid and fatty acids.

Since about 1890 wood chemists have known that the crude soap contained something valuable, but how to isolate it was something else again. The Swedes, old hands at pulp making, began writing about the soap's possibilities in the 1890's. By the early 1900's Swedish pulp mills here and there were recovering Tallolja, as the Swedes called it.

Little notice was taken, though, till World War I. Under the blockade, German scientists, their stomachs giving them a personal interest in their research, seized on every available source of fats, oils, and substitutes for them. The price of tall oil skyrocketed from 1 to 80 cents a pound.

By 1921 the price had dropped back to 2 cents, though tall oil production quietly increased. A few chemists and naval stores men knew, kept their eyes open and their fingers crossed against another war. In the early 1930's the paper trade journals occasionally gave tall oil a few inches of space, usually for abstracts translated from the Swedish. Most people didn't bother. There were fats and oils to burn!

The Germans, of course, knew and kept their hands in.

Now all the old wants are clamoring back, and in Germany and England and the United States they're going to get worse before they get better. Right here, we wonder if you've been a little misled. Tall oil, with its rosin acid and fatty acids, isn't chemically either a true oil or a fat. It's a naval store. Moreover, we can't eat tall oil---not yet, anyway. The practical point is that tall oil will get us more fat to eat because it will in many cases substitute for edible fats which, without it, would be eaten by war industry, not us.

How much tall oil can we count on, then? And how does it compare in amount with our fats and oils supply?

The 1942 U. S. production of fats and oils was about 5 million tons. The same year we produced 26,887 tons of tall oil. Discounting the latter figure by 10 percent -- the worthless fraction--we see that tall oil production amounted to about 1/200th of fats and oils production. Of course, it doesn't follow that tall oil can be substituted on a ton for ton basis, but the fraction gives you a rough idea; in these days such an extension is not negligible. And if tall oil production should expand, as many of its enthusiasts say it easily could--well, we'll just point out for what it is worth that the 1942 production rose 46 percent over 1941.

It also might be well to tell you that manufacturers of fatty acids met recently with Food Distribution Administration officials in Washington to find ways and means of combating the shortage of fats and oils. The FDA asked the industry experts for proposals to expand tall oil refining capacity. Thus, while predictions have a way of crossing up even the best prophets, it looks very much as if tall oil production is slated for another increase this year.

Certainly we don't need to worry about the raw materials. We have a lot of pine trees in the United States. We have more than Germany.

--V--

DRIED EGGS SET ASIDE FOR GOVERNMENT USE

Food Distribution Order No. 41 reserves the entire 1943 production of spray process dried whole eggs for delivery to Government agencies. This order, affecting all manufacturers of dried whole eggs, will be administered by the Food Distribution Administration and will become effective March 25. The order also limits the production of frozen and liquid eggs, dried yolks, dried albumen, and pan-dried whole eggs to the quantities produced and sold for commercial use in the United States in 1942. Government requirements have been increasing rapidly.

The FDA has bought about 260 million pounds of dried eggs since purchasing began on March 15, 1941. The fresh eggs that went to make this quantity would make one big fried egg over 10 miles square.

CERTIFICATE OF FARM WAR SERVICE TO BE AWARDED TO FOOD PRODUCERS

Farm families who have enlisted in the huge 1943 food production program will be awarded a Certificate of Farm War Service in recognition of their war work. The 11 x 14 inch certificates, signed by Secretary of Agriculture Claude R. Wickard, will be presented by County USDA War Boards as soon as possible after the completion of the 1943 farm mobilization drive. The mobilization drive, aimed at getting each farmer to produce his share of the 1943 food production goals, began January 12 and was completed by the end of March.

"This certificate" said Secretary Wickard, "is a simple word of appreciation and encouragement to the fighting units of the food front--the Nation's farm families. On the long, hard work of these families, on their ingenuity in overcoming every handicap imposed by total war, will depend to a considerable measure the outcome of this war."

The 1943 farm plan that each farm operator is now filling out will be the basis for making the awards.

--V--

DON'T WASTE TOOLS, SEEDS, OR SPRAYS, DEPARTMENT WARNS

Don't waste garden tools, seeds, and insecticides when you put in that Victory Garden. The Department of Agriculture reports that there are enough of these essentials but none to throw away.

Take tools. The Victory Gardener needs a hoe, rake, and spade, but he doesn't need a power-driven sprayer or other fancy gadgets for his little "farm."

And seeds. Each 10-cent packet of tomato, pepper, parsley, and a few other kinds contains enough seeds to plant four or five gardens. So you can save seeds by trading a few with the guy next door.

Insecticides and fungicides--spray materials to you--may be scarcer than any other Victory Garden essential. Use them only as needed and try to buy those that contain sulphur compounds. Copper has gone to war.

--V--

If you like whipped cream desserts, here is a way to whip that wartime cream that is much too thin for ordinary whipping. Just add one level teaspoonful of karaya gum, gum acacia, gum tragacanth, or locust bean gum--any one of them will work--to a cup of cold cream. And thank the New York State Experiment Station for this information.

SCHOOL LUNCH FOOD DISTRIBUTION TO BE HANDLED ON REVISED BASIS

Distribution of foods through State Welfare Departments to local communities for use in school lunch programs is being discontinued on April 30, and any inventories remaining on that date will be released for Federal procurement programs, or turned back to the normal channels of trade for civilian supply.

Under a new program announced by the Food Distribution Administration in February, schools are able to purchase foods locally for their lunch programs and receive reimbursement in part from FDA. Schools that still are operating under the old distribution system will be allocated enough food between now and April 30 to enable them to continue operations on the present basis until the end of the school year--May or June in most States.

National inventories maintained for both school lunch and direct distribution programs on February 1 totaled approximately 112,000,000 pounds. This figure included some 29,900,000 pounds of food now on the ration list, these rationed foods going to school lunch programs and to schools already having surrendered ration coupons for them. During January, distribution totaled 65,800,000 pounds, of which 43,000,000 pounds went to school lunches; 2,200,000 to public institutions for public assistance clients; and 20,600,000 pounds to public assistance cases. Foods distributed in January to public assistance cases and institutions included only one or two items subsequently rationed. All distribution to these two groups will end June 30.

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STRAWBERRY PURCHASE PROGRAM ANNOUNCED

The Department of Agriculture will purchase sulphur dioxide packed strawberries this summer under a program similar to last year's, when 21,739,000 pounds of processed strawberries were bought for Government use. It is expected that about the same quantity will be purchased in 1943 in the southern area that includes the States of Florida, Louisiana, Arkansas, Alabama, Tennessee, North Carolina, South Carolina, Oklahoma, and Kentucky. Purchases also may be made in other States depending on available supplies of strawberries when the crop is marketed.

Purchases will be made through approved packers who contract with the Food Distribution Administration and only the varieties of strawberries suitable for processing in sulphur dioxide solution--Klondyke (including Klonmore and 630), Blakemore, Missionary, and Marshall varieties will be purchased. The berries are packed in 50-gallon, white oak barrels and preserved by adding the sulphur dioxide solution.

MORE WHEAT RELEASED FOR LIVESTOCK FEEDING

Immediate action will be taken to put into effect the provisions of a bill releasing an additional 100 million bushels of Government-owned wheat for feed. The last of the 125 million bushels of Government-owned wheat released by Congress last summer was sold early in March.

Supplies of Government-owned wheat are available in all principal terminals and are ready to go as fast as orders can be handled and freight cars obtained, loaded, and shipped. Orders can be placed through dealers, distributors, Commodity Credit Corporation regional offices, and Agricultural Adjustment Agency county committees.

The lowest feed wheat price--93 cents--will prevail in some of the counties in Southern Minnesota. The lowest price in Iowa will be 94 cents, and the lowest in Illinois will be 99 cents. Prices in some areas outside the Corn Belt include partial freight differentials. In New England and Florida, the price will be $1.09 per bushel. Prices on the Pacific Coast will range from $1.04 on the north coast to $1.09 in Southern California. In the Southeast, prices will be $1.07 per bushel delivered in North and South Carolina, Georgia, Alabama, and Eastern Tennessee. In Texas and Oklahoma, the price will be $1.03 per bushel.

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FARMERS PLAN FOR BIGGER TURKEY CROP

Turkey growers plan to raise about 37 million turkeys this year--the largest crop of turkeys ever produced in this country and 12 percent larger than the 1942 crop.

Some difference between February indications and actual performance is to be expected, however, turkey experts point out. This difference will depend upon the supply and price of hatching eggs, poult prices, the availability and cost of high protein feeds, and the willingness of growers to accept late-hatched poults. In former years, the February 1 intention has slightly exceeded actual performance, in 1938 by 3 percent, in 1939 and 1940 by 2 percent, in 1941 by less than 1 percent, and in 1942 by 8 percent.

A sharp increase in expected poults is shown this year in flocks with less than 100 turkeys last year. For these flocks there is reported only a moderate increase in poults to be home hatched but a large increase in intended purchases of hatchery poults, especially in the North Atlantic, North Central, and Western States.

The number of turkey breeding hens on hand January 1 of this year was about 1 percent less than a year ago.

-PERTAINING TO MARKETING-

The following reports and publications, issued recently, may be obtained upon request from the Food Distribution Administration, U.S. Department of Agriculture, Washington, D.C.

What Price Less Food (Address) ..... By Roy F. Hendrickson

Wholesale and Retail Distributors' Obligations in Wartime (Address) ..... By Dan A. West

Hunger Quits School

Driven-In Receipts of Livestock, 1942

Annual Report on Tobacco Statistics, 1942

Cotton Quality Statistics, U.S., 1941-42

List of Active Vegetable Dehydrators and Proposed Dehydration Plants

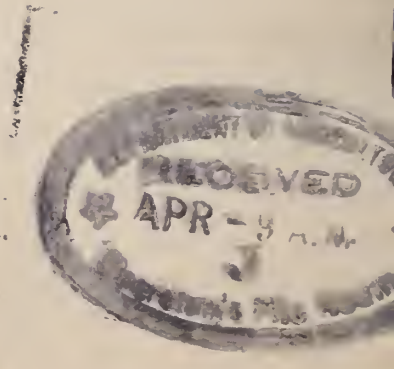
Preliminary Review 1942-43 Marketing Season for Idaho Potatoes

Standards:

Tentative U.S. Standards For Grades of Canned Blended Grapefruit Juice and Orange Juice
U.S. Standards for Grades of Extracted Honey
Tentative U.S. Standards for Grades of Canned Concentrated Orange Juice
Amendment to Tentative U.S. Standards for Grades of Processed Raisins

Food Distribution Orders:

No.1 Amendment 1 (Bakery Products)
No.6.1 Amendment 1 (Citrus Fruit)
No.3 Amendment 3 (Citrus Fruit Juices)
No.18 Amendment 1 & 2 (Tea)
No.21 (Tea)
No.22 (Canned and Processed Foods)
No.22.1 (Canned Fruits and Vegetables)
No.22.2 (" " " ")
No.22.3 (" " " ")
No.23 (Fish)
No.24 (Terminated)
No.25 (Cocoa Beans)
No.25.1(Cocoa Beans)
No.26 (Livestock and Meats)
No.27 (Livestock and Meats)
No.23 Amendment 1
No.28 (Livestock and Meats)
No.28.1(Livestock and Meats)
No.29 (Fats and Oils)
No.30 (Dehydrated Vegetables)
No.30.1(" ")
No.31 (Oiticica Oil)
No.32 (Castor Oil)
No.33 (Glycerine)
No.34 (Glycerine)
No.35 (Rapeseed & Mustard Oil)
No.36 (Cashew Nut Liquid)
No.37 (Sperm Oil)
No.38 (Palm Oil)
No.39 (Tung Oil)
No.40 (Shell Eggs)
No.41 (Dried Eggs)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